

### REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-15, 17-22, 24-28, 49, 50, and 53-64 are presently active in this case. Claims 15, 22, 50, 58, and 62 are amended. Since all elements of the claims were earlier claimed or inherent in the claims as examined, no new issues are presented; thus, it is respectfully requested that this Amendment under 37 C.F.R. § 1.116 be entered by the Examiner. The response will present Applicant's position in better form for appeal. No new matter has been added.

The Final Office Action objects to Claims 15, 22, 50, 58, 59, 62, and 63 because of informalities; rejects Claims 1-15, 17-22, 24-28, 49-50, 53-56, 59, 60, 63, and 64 under 35 U.S.C. § 103(a) as unpatentable over Yonekubo (U.S. Patent No. 6,470,115) in view of Cromack (U.S. Patent No. 4,726,662); rejects Claims 57 and 61 under 35 U.S.C. § 103(a) as unpatentable over Yonekubo in view of Cromack, and further in view of Stern; and objects to Claims 58 and 62 as dependent upon a rejected base claim, but indicates that Claims 58 and 62 will be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In regard to the objection to Claims 15, 22, and 50 because of informalities, Applicant respectfully traverses the objection for the following reasons. The Final Office Action asserts that "'at least three values' is a new term not described in the specification."<sup>1</sup> However, Figs. 10A-10C and Figs. 19A-19C clearly show that the contact area may have at least 3 different values. In addition, Applicant has amended Claims 15, 22, and 50 to further clarify these claims. Accordingly, Applicant respectfully requests withdrawal of the objection to Claims 15, 22, and 50.

In regard to the objection to Claims 59 and 63 because of informalities, Applicant respectfully traverses the objection for the following reasons. The Final Office Action asserts that “[i]t is not clear how beams can be disposed on the light transmitting member that support [*sic*] a periphery of the elastic member.”<sup>2</sup> Both Claims 59 and 63 recite “beams disposed on the light transmitting member and each supporting a periphery of the elastic member.” “Beams” may be defined as “. . . piece of wood, metal, or concrete, esp. one used to support weight in a building or other structure.”<sup>3</sup> It is clear that these beams may be disposed on the lighting transmitting member and that each of these beams may support a periphery of the elastic member. Accordingly, Applicant respectfully requests withdrawal of the objection to Claims 59 and 63.

In regard to the objection to Claims 58 and 62 because of informalities, Applicant has amended Claims 58 and 62 to further clarify these claims. Accordingly, Applicant respectfully requests withdrawal of the objection to Claims 58 and 62.

In regard to the rejection of Claims 1-15, 17-22, 24-28, 49, 50, 53-56, 59, 60, 63, and 64 under 35 U.S.C. § 103(a) as unpatentable over Yonekubo in view of Cromack, Applicant respectfully traverse the rejection for the following reasons.

To establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a), each of three requirements must be demonstrated. First, Yonekubo in view of Cromack, when combined, must teach or suggest each and every element recited in the claims.<sup>4</sup> Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine the references in a manner

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<sup>1</sup> Office Action, page 2.

<sup>2</sup> Office Action, page 3.

<sup>3</sup> Cambridge Dictionary of American English, available at [http://dictionary.cambridge.org/define.asp?key=beam\\*2+0&dict=A](http://dictionary.cambridge.org/define.asp?key=beam*2+0&dict=A).

<sup>4</sup> See MPEP § 2143.

resulting in the claimed invention.<sup>5</sup> Third, a reasonable probability of success must exist with respect to the proposed combination relied upon in the rejection.<sup>6</sup>

Claim 1 recites a display device comprising, *inter alia*, a light transmitting member comprising a first surface provided with depressions and a second surface, a light source that irradiates the first surface of the light transmitting member with light, and a control mechanism configured to switch between total reflection and transmission a behavior of the light, incident into the light transmitting member from the light source, at an interface between the light transmitting member and an external region adjacent to the second surface of the light transmitting member.

The Final Office Action states that Yanekubo does not teach or disclose a first surface provided with depressions as recited in Claim 1. The Final Office Action asserts that Cromack discloses “a light transmitting member (50) with a first and second surface and the first surface (54) having depressions (52, 54) and the light source (56) irradiating the first surface.”<sup>7</sup> The Final Office Action further asserts that “[t]hough Cromack’s device consists of a liquid crystal, the teachings of the light transmitting member as it applies to a display are equally applicable to any type of device for enhancing the contrast of the display (col. 2, lines 46-51).”<sup>8</sup> Applicant respectfully disagrees.

Yanekubo and Cromack teach away from their combination. More specifically, Cromack discloses “a liquid crystal apparatus 10 as part of a display assembly comprising a prismatic lens system indicated generally by reference to numeral 50.”<sup>9</sup> “A primary feature of the present invention is that the liquid crystal material will scatter light impinging thereon when in a field-off or random alignment state, and in the field-on or orderly aligned state the

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<sup>5</sup> See id.

<sup>6</sup> See id.

<sup>7</sup> Office Action, page 4.

<sup>8</sup> Office Action, page 4.

<sup>9</sup> Col. 9, lines 9-12 of Cromack.

liquid crystal material will be substantially optically transparent.”<sup>10</sup> “Additionally, materials other than liquid crystal which scatter light on one hand and transmit it on the other in response to a prescribed input may be utilized in the context of the present invention.”<sup>11</sup> In other words, in Cromack, a light transmitting member (50) can both scatter and transmit the light impinging thereon. On the other hand, in Yanekubo a lighting transmitting member (21) serves as a light guide body (light guide unit) and has high light transmittance. In other words, in Yanekubo, the lighting transmitting member (21) can only transmit the light impinging thereon. Accordingly, in Yanekubo, additional cylindrical or prismatic small transparent bodies 45, for example, are used to obtain scattered light.<sup>12</sup> Since Yanekubo and Cromack teach away from their attempted combination, Applicants submit that it is improper to combine Yanekubo and Cromack.<sup>13</sup>

Accordingly, Applicants submit that Claim 1 is patentable and the rejection of Claim 1 under 35 U.S.C. § 103(a) should be withdrawn. Independent Claims 8 and 49, although of different statutory class and/or of different scope, includes recitations similar to those discussed above in relation to Claim 1. Claims 2-7, 9-14, and 53-56 depend from Claims 1 or 8. For at least the reasons given above with respect to Claim 1, Applicant respectfully request that the rejection of Claims 2-14, 49, and 53-56 under 35 U.S.C. § 103(a) be withdrawn as well.

Claim 15 recites a display device comprising, *inter alia*, a light transmitting member comprising first and second surfaces, a light transmitting material, and a control mechanism configured to change a contact state of said light transmitting material with respect to the second surface of said light transmitting member on an optical path of the light, wherein the control mechanism is capable of changing a value of a contact area, in which the light

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<sup>10</sup> Col. 4, lines 11-16 of Cromack.

<sup>11</sup> Col. 4, lines 4, 17-20 of Cromack.

<sup>12</sup> Col. 8, lines 6-23 of Yonekubo.

transmitting material is in contact with the second surface of the light transmitting member, among at least three values according to grayscale image to be displayed.

The Final Office Action does not address the above-mentioned control mechanism capable of changing the value of a contact among at least three values according to grayscale image to be displayed, as recited in Claim 15. In other words, the Final Office Action lacks an explanation of how Yanekubo and Cromack allegedly teach or suggest the above-mentioned control mechanism capable of changing the value of a contact, as recited in Claim 15. Should the rejection of Claim 15 as unpatentable under 35 U.S.C. § 103(a) over Yanekubo in view of Cromack be maintained, Applicant respectfully requests the PTO to particularly point out in a non-final Office Action where the above-mentioned control mechanism capable of changing the value of a contact is taught or suggested in Yanekubo in view of Cromack, so that Applicant may have the opportunity to reply completely.

In addition, neither Yanekubo nor Cromack teaches or suggests a control mechanism capable of changing a value of a contact area, in which the light transmitting material is in contact with the second surface of the light transmitting member, among at least three values according to grayscale image to be displayed, as recited in Claim 15. On the other hand, in Yanekubo, for example, “grayshading can be made by adjusting the application time of the voltage applied to the electrodes 31 and 35 of each of the optical switching elements 1.”<sup>14</sup> In other words, in Yanekubo, according to grayscale image to be displayed, the application time of the voltage applied to each electrode is adjusted. Also, in Cromack, “liquid crystal apparatus 10 can control the transmission of light therethrough in response to the application of an electric field.”<sup>15</sup> In other words, in Cromack, according to grayscale image to be displayed, the electric field applied to each liquid crystal apparatus is adjusted.

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<sup>13</sup> See MPEP 2145, page 2100-153.

<sup>14</sup> Col. 12, lines 55-58 of Yonekubo.

<sup>15</sup> Col 6, lines 42-44 of Cromack.

Accordingly, Applicants submit that Claim 15 is patentable and the rejection of Claim 1 under 35 U.S.C. § 103(a) should be withdrawn. Independent Claims 22 and 50, although of different statutory class and/or of different scope, includes recitations similar to those discussed above in relation to Claim 15. Claims 17-21, 24-28, 59, 60, 63, and 64 depend from Claims 15 or 22. For at least the reasons given above with respect to Claim 15, Applicant respectfully request that the rejection of Claims 17-22, 24-28, 559, 60, 63, and 64 under 35 U.S.C. § 103(a) be withdrawn as well.

In regard to the rejection of Claims 57 and 61 under 35 U.S.C. § 103(a) as unpatentable over Yonekubo in view of Cromack, and further in view of Stern, Applicant respectfully traverses the rejection for the following reasons.

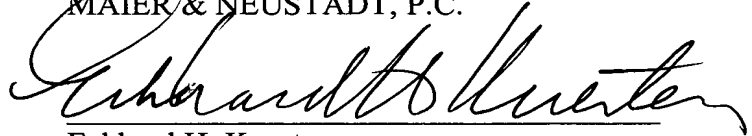
Claims 57 and 61 depend on Claims 15 or 22. As discussed above with respect to Claim 15 and 22, Yonekubo in view of Cromack does not teach or suggest each and every element recited in Claims 15 or 22. Stern does cure the deficiencies of Yonekubo and Cromack in this regard. For example, even assuming Stern could properly be combinable with Yonekubo and Cromack, which Applicant disputes, Stern does not teach or suggest a control mechanism capable of changing a value of a contact area, in which the light transmitting material is in contact with the second surface of the light transmitting member, among at least three values according to grayscale image to be displayed, as recited in Claims 15 and 22. Accordingly, Applicants respectfully requests that the rejection of Claims 57 and 61 under 35 U.S.C. § 103(a) be withdrawn.

Claims 58 and 62 depend on Claims 15 or 22. For at least the reasons given above with respect to Claims 15 and 22, Applicant respectfully submits that Claims 58 and 62 are in condition for allowance as well.

In view of the foregoing remarks, Applicants respectfully submit that each and every one of Claims 1-15, 17-22, 24-28, 49, 50, and 53-64 defines patentable subject matter, and that the application is in condition for allowance. Applicants respectfully request reconsideration and reexamination of this application and timely allowance of the pending claims.

Respectfully submitted,

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